

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/JP2004/018442

International filing date (day/month/year)
03.12.2004

Priority date (day/month/year)
05.12.2003

International Patent Classification (IPC) or both national classification and IPC
G06F9/48

Applicant
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1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

10/581054

International application No.
PCT/JP2004/018442

IA20 Rec'd PCT/PTO 30 MAY 2006

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/JP2004/018442

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-6
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-6
Industrial applicability (IA)	Yes: Claims	1-6
	No: Claims	

2. Citations and explanations

see separate sheet

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/JP2004/018442

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. Reference is made to the following document:

D1: BAKER T P ET AL: "THE CYCLIC EXECUTIVE MODEL AND ADA"
PROCEEDINGS OF THE REAL TIME SYSTEMS SYMPOSIUM. HUNTSVILLE,
DEC. 6 - 8, 1988, WASHINGTON, IEEE COMP. SOC. PRESS, US, vol. SYMP. 9,
6 December 1988 (1988-12-06), pages 120-129, XP000118714

2. The present application does not meet the criteria of Article 33(1) PCT, because the
subject-matter of claim 1 does not involve an inventive step in the sense of Article 33(3)
PCT.

2.1. Document D1 is regarded as being the closest prior art to the subject-matter of claim 1,
and insofar as this claim and the corresponding passages in the description can be
understood, this document shows the following features thereof (the references in
parentheses applying to this document).

*A task management system for executing a task selected from tasks structuring a task
combination (cyclic executive supports two modes, with mode 0 controlling four periodic
processes and mode 1 controlling another set of processes)(section 4 "Mode changes",
first five lines), comprising:*

*a judging unit for judging whether there is a task combination switchover request or not
(when an event requesting a mode change is received)(page 123, left-hand column,
lines 1-7);*

*a switchover unit for switching over the task combination after completing an execution
of a task in the tasks structuring the task combination before the switchover when
judging that there is the switchover request (the requested mode change can take place
at the end of the current action, at the end of the current frame or at the end of the major
cycle); and*

an execution unit for executing the task selected from the tasks structuring the task

combination switched over by said switchover unit (the mode is switched and the new set of processes is executed).

- 2.2. The subject-matter of claim 4 therefore differs from this system known from document D1 in that the claimed system comprises:

a switchover unit for switching over the task combination after completing an execution of a specified task whereas, in document D1, said specification is not explicitly disclosed.

- 2.3. The technical effect produced by the above identified difference can be regarded as being the improved knowledge about the state of the system because the identity of the last task to be executed before the switchover could take place is known in advance.

- 2.4. The objective technical problem to be solved may thus be regarded as how to provide for a better defined state of the system upon said switchover.

- 2.5. The method of document D1 discloses three possible ways to handle the execution of a switchover request. The corresponding levels of knowledge about the identity of the last task, namely the sets comprising the possible last tasks before the actual switchover, are, in increasing order of determinism:

- i) a set with all the tasks, when the switchover is carried out at the end of the current task,
- ii) a set with the last tasks of all frames, when the switchover is carried out at the end of the current frame,
- iii) a set with one task, when the switchover is carried out at the end of the major cycle.

The person skilled in the art, in order to solve the above said technical problem, would regard as a normal design procedure the selection, out of a finite number of equally likely alternatives, of an intermediate way of handling the switchover, namely one which would produce a set comprising only arbitrarily selected tasks, arriving, thus, to a system as claimed.

- 2.6. Therefore, the subject-matter of claim 1 does not involve an inventive step (Art. 33(3))

PCT).

The same reasoning applies, mutatis mutandis, to the subject-matter of claim 4, which is, therefore, also not inventive (Art. 33(3) PCT).

- 2.7. As to dependent claims 2, 3, 5 and 6, their subject-matter is also regarded as being not inventive (Art. 33(3) PCT), the presence of the additional features contained therein being regarded as obvious to the skilled person.

Re Item VIII

Certain observations on the international application

1. The description is not in conformity with the claims as required by Rule 5.1(a)(iii) PCT. Due to the particular way in which the sentences have been built and to the terminology used therein, the technical problem as well as its solution and the produced advantageous effects can be hardly identified and understood.
- 1.1. Moreover, the description is also not in conformity with the provisions of Art. 5 PCT; with regard to clarity, in particular, a crystal clear contradiction can be identified between the sentence "*Further, another effect is that the task combination can be switched over without executing the process (such as an execution of the task of which the process completion is not requested when switching over the task combination) that should not be processed.*" of page 21, lines 11-15 and the sentence "*Further, another effect is that the task combination can be switched over without executing the process that should be processed.*" of page 22, lines 13-15, which renders the whole description obscure.

Andrea Carciofi
(Examiner)